ICF-C400

SERVICE MANUAL

US Model
Canadian Model

REVISED

This set is the almost same as ICF-C320.
Refer to ICF-C320/C322 Service Manual previously issued for the information of this set.
The following parts differ from those in ICF-C320.

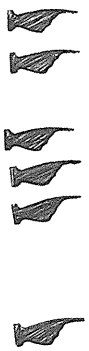
1. DIFFERENCE PORTION

—Specification—

Dimensions: Approx. 250×57×155mm (w/h/d)
(9⅞×2¼×6⅛ inches)
incl. projecting parts and controls

2. DIFFERENCE PARTS

—Mechanical Parts—



No.	Part No.	Description
1	3-901-722-01	(US) ···CABINET (UPPER) (LIGHT WOOD)
1	3-901-722-11	(Canadian) ···CABINET (UPPER) (DARK WOOD)
7	3-901-710-61	KNOB (BAND)
8	*3-901-702-61	KNOB (VOL)
9	*3-901-724-41	CABINET (LOWER)
12	*3-901-709-61	KNOB (TUNING)
13	3-901-713-61	BUTTON (DREAM BAR)
15	3-901-712-61	BUTTON (MAIN)
16	*3-901-706-11	PANEL, BACK
17	3-901-720-01	PLATE, TRANSPARENT
18	3-901-711-61	KNOB (FUNCTION)

Part No.	Description
*3-901-557-01	(US) ···INDIVIDUAL CARTON
*3-901-559-01	(Canadian) ···INDIVIDUAL CARTON

NOTE:

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

FM/AM DIGITAL CLOCK RADIO

SONY®

9-953-903-11
(Including 9-953-903-91)

Sony Corporation
Audio Group

English
89F0233-1
Printed in Japan
©1989.6
Published by A/V Engineering Service Dept.

ICF-C320/C322

SERVICE MANUAL

US Model
ICF-C320 :
Canadian Model
ICF-C320/C322 :
AEP Model
ICF-C320 :
E Model
ICF-C320 :

Photo : ICF-C320 (beige type)

SPECIFICATIONS

Frequency range	FM : 87.6–108MHz (US, Canadian model) FM : 87.6–107.5MHz (AEP, E model) AM : 530–1,710kHz (US, Canadian model) AM : 531–1,602kHz (AEP, E model)
Antenna	FM : AC cord antenna AM : Built-in ferrite bar antenna
Speaker	Approx. 6.6cm (2⅝ inches) dia.
Power output	200mW (at 10% harmonic distortion)
Power requirement	120V AC, 60Hz (US, Canadian, E model) 220V AC, 50Hz (AEP model) For the power backup function : 9V DC, one 6F22 battery
Battery life	Approx. 40 hours, using Sony battery S-006P (U)
Dimensions	Approx. 250×57×158mm (w/h/d) (9⅞×2¼×6¼ inches) incl. projecting parts and controls
Weight	Approx. 800g (1lb 28 oz) not incl. battery

Design and specifications subject to change without notice.

FEATURES

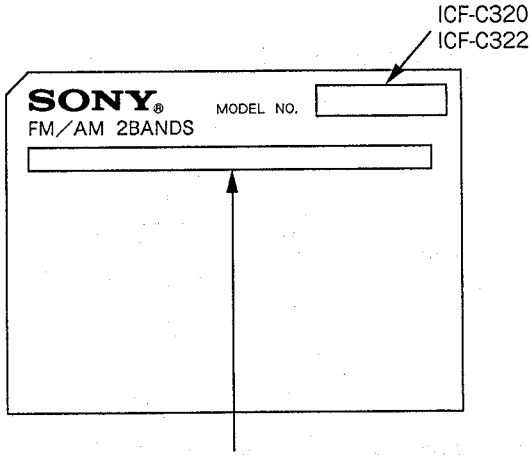
- High quality FM/AM 2 band radio combined with an electric digital alarm clock and timer.
- Choice of awakening to radio alarm, buzzer alarm, or dual alarm : Alarm A (radio) and alarm B (buzzer).
- Power backup function to keep the clock operating during a power interruption, using an optional 6F22 battery.
- DREAM BAR SNOOZE/SLEEP OFF (US, Canadian, E model), REPEAT ALARM/SLEEP OFF (AEP model) : feather-light touch to operate, and having functions : snooze alarm, and sleep timer off.

MODEL IDENTIFICATIONS

–Model Number Label–

ICF-C320 : US model
ICF-C320 : Canadian model
} Carved on lower cabinet

ICF-C320 : AEP model
ICF-C320 : E model
ICF-C322 : Canadian model
} Model number label



US, Canadian model : AC : 120V 60Hz 5W
AEP model : AC : 220V~50Hz 5W
E (Panamanian) model : AC : 120V~60Hz 5W

MICROFILM

FM/AM DIGITAL CLOCK RADIO

SONY®

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

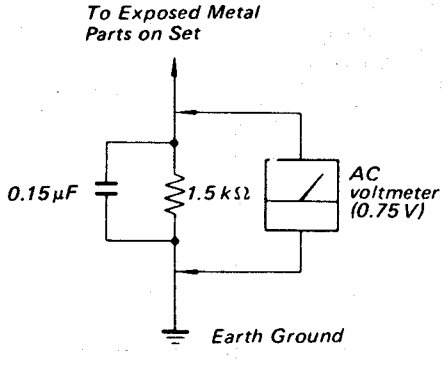


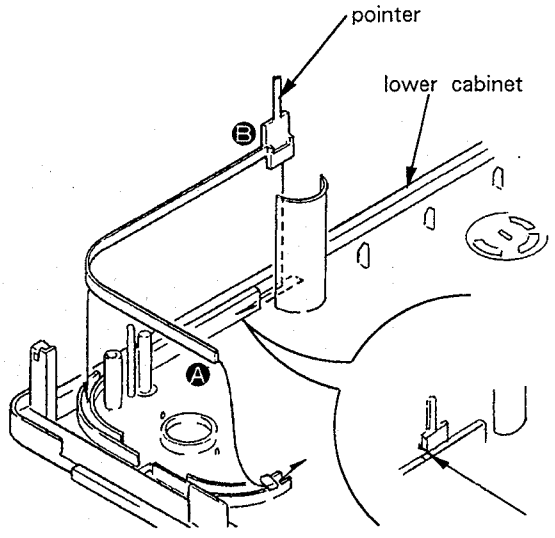
Fig. A. Using an AC voltmeter to check AC leakage.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

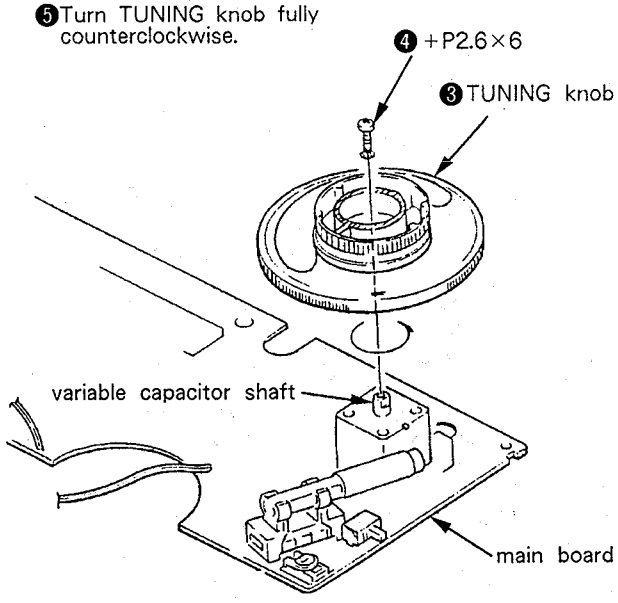
SECTION 1
DIAL POINTER SETTING

❶ Put the pointer in the groove of lower cabinet in alphabetical order.



❷ Set the left end of the pointer to the righe scratched line as illustrated.

❺ Turn TUNING knob fully counterclockwise.



❻ Install main board so that TUNING knob engages pointer gear.

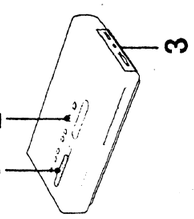
ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 2
GENERAL

How to Set the Sleep Timer

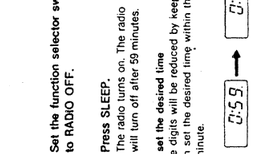
By using the sleep timer, you can fall asleep while listening to the radio. You can set the sleep time so that the radio turns off up to 59 minutes later.



1 Set the function selector switch to RADIO OFF.

2 Press SLEEP.
The radio turns on. The radio will turn off after 59 minutes.

To set the desired time
The digits will be reduced by keeping SLEEP pressed. So, you can set the desired time within the range from 59 minutes to 1 minute.



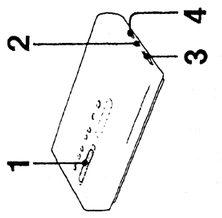
3 Tune in the desired station and adjust the volume.
The radio will turn off automatically after the preset time had elapsed.

To turn off the radio before the preset time
Press the DREAM BAR SNOOZE/SLEEP OFF (US, Canadian, E model), REPEAT ALARM/SLEEP OFF (AEP model).

To check the remaining minutes
Press the SLEEP button lightly.

If the preset alarm time comes while the sleep timer is operating
The alarm buzzer will not sound.

Radio Operation



1 Set the function selector switch to RADIO ON.
2 Select the desired band.
3 Tune in the desired station.
4 Adjust the volume.

To turn off the radio, set the function selector switch to OFF.

For Improved Reception
FM: Extend the AC power cord fully to increase the FM sensitivity.
AM: Since the reception is affected by the direction of the radio, rotate the unit horizontally for optimum reception.

When the Alarm Sound Comes on

The alarm sound will shut off automatically after 59 minutes.

To stop the radio or buzzer sound, set the function selector switch to OFF or press the ALARM RESET button.

If you wish to stop the dual alarm, press the ALARM RESET button once to stop the radio and once to stop the buzzer.

Snooze alarm function
If you wake to the alarm sound in the morning but want to doze for a few more minutes, just lightly press the DREAM BAR SNOOZE/SLEEP OFF (US, Canadian, E model), REPEAT ALARM/SLEEP OFF (AEP model).
The alarm sound will be silenced, but will automatically come on again after about nine minutes. If you want to doze more, press the bar again. You can repeat this snooze function as many times as you like. If you do not want the alarm sound any more after pressing the bar, press the ALARM RESET button.

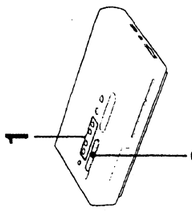
To wake to the alarm sound at the same time the next day
Stop the radio or buzzer sound by pressing the ALARM RESET button. Leave the function selector switch to SINGLE ALARM Ⓐ RADIO, Ⓑ BUZZER or DUAL ALARM.

If you want to listen to the radio continuously
Set the function selector switch to RADIO ON, since the alarm radio stops after 59 minutes.

The volume of the alarm sound
The radio volume can be adjusted.
The buzzer volume is fixed.

To check the preset time
Press ALARM Ⓐ RADIO to check the radio preset time, and ALARM Ⓑ BUZZER for the buzzer.

How to set the Alarm



1 Set the alarm time for radio or buzzer.
Set the alarm time with TIME SET H and M while holding down ALARM Ⓐ RADIO.
Set th buzzer alarm time with TIME SET H and M while holding down ALARM Ⓑ BUZZER.

To advance the minute digits rapidly
Keep the H and M buttons pressed while holding down the ALARM button

2 Set the function selector switch to the desired alarm position: SINGLE ALARM Ⓐ RADIO, Ⓑ BUZZER or DUAL ALARM.

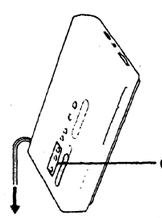
The desired alarm sound will come on at the preset time.

For radio alarm
Tune in the desired station and adjust the volume as described in "Radio operation".

For dual alarm
If you set the radio and the buzzer to the same time, only the radio sound will be heard.

If the buzzer alarm is set for *before* the time the radio alarm stops, the alarm shifts from radio to buzzer at the alarm preset time.

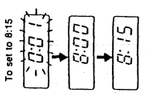
How to Set the Clock



1 Connect the AC power cord to a wall outlet.
Figures will appear and begin to flicker.

2 Adjust the clock to the current time with the TIME SET buttons, H (hour) and M (minute), while holding down the CLOCK button.

Example:
To set to 8:15



24-hour system (AEP model)	12-hours system (US, Canadian, E model)
0:00 = midnight 12:00 = noon	AM 12:00 = midnight PM 12:00 = noon

Note: The minute digits advance to "00" after "59". The hour digits do not advance.

Zero Second Adjustment
If you want to adjust the time exactly to the second with a radio or a telephone time signal, proceed as in the following example.

Example: To set to 7:15
1 Adjust the time indication to as described before.
2 While holding down the CLOCK SET button, press the M button simultaneously with the radio or the telephone signal.
The clock then will begin to operate, showing the precise time.

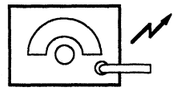
To advance the minute digits rapidly
Keep the H and M buttons pressed while holding down the CLOCK SET button.

• The illustration of the time display is for the model of 24-hour system.

SECTION 3
ELECTRICAL ADJUSTMENTS

AM Section

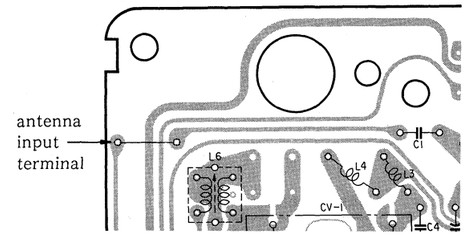
AM RF signal generator



Put the lead-wire antenna close to the set.

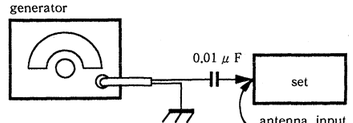
400Hz, 30%
AM modulation
Output level : as low as possible

【MAIN BOARD】(Conductor Side)



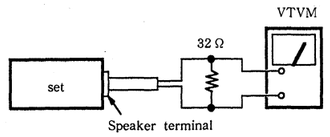
FM Section

FM RF signal generator



±22.5kHz frequency deviation by 400Hz signal

antenna input terminal (See right illustration.)



● Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

( ) : AEP, E model

AM IF ADJUSTMENT	
Adjust for a maximum reading on VTVM	
T1	455kHz

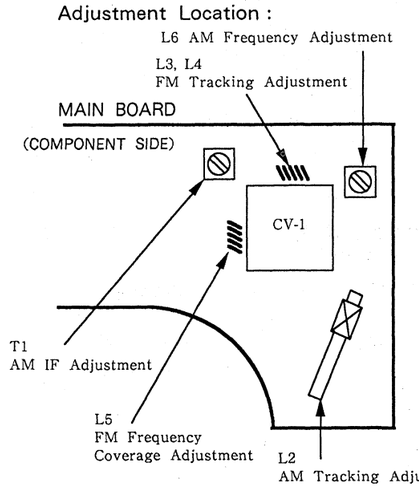
AM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM	
L6	520kHz
CT4	1750 (1680) kHz

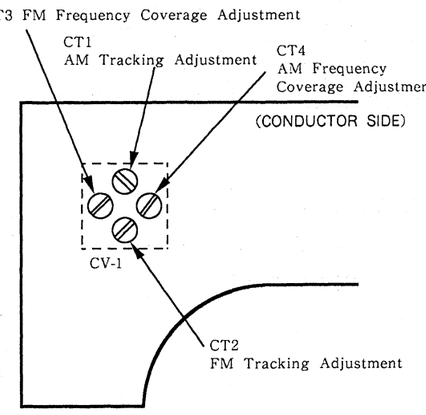
AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM	
L2	600kHz
CT1	1400kHz

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM	
L5	86,5 (87,0) MHz
CT3	109,5 (108,3) MHz

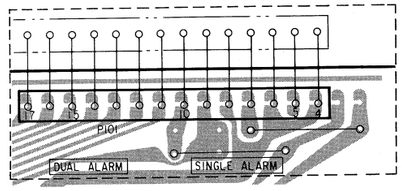
FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM	
L3, L4	86,5 (87,0) MHz
CT2	109,5 (108,3) MHz

Adjustment Location :

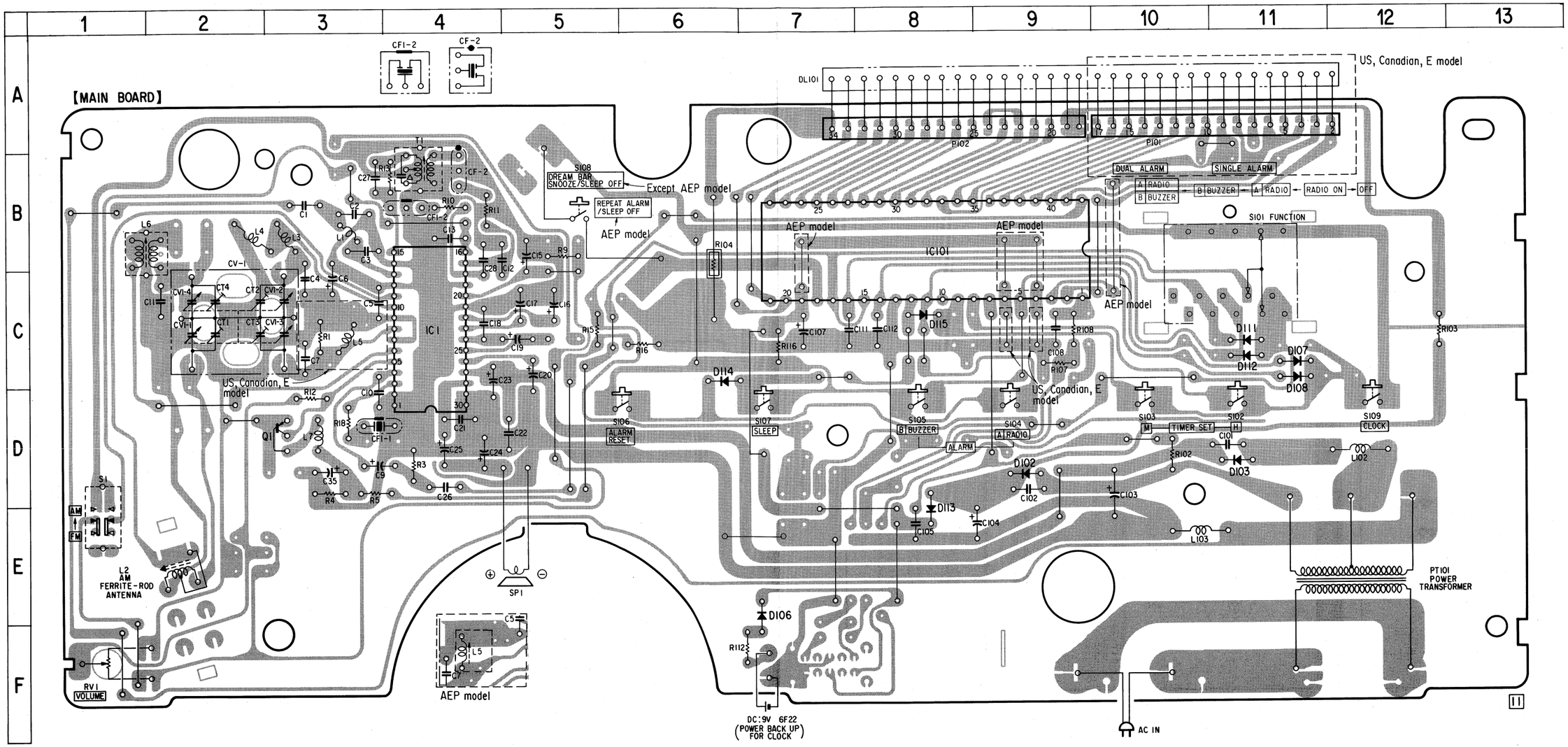




SECTION 4
DIAGRAMS



4-1. PRINTED WIRING BOARD

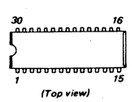


Note on Printed Wiring Boards :

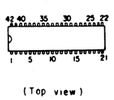
- ○— : parts extracted from the component side.
- ⊡← indicates side identified with part number.

● SEMICONDUCTOR LEAD LAYOUTS

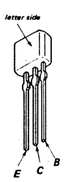
CXA1019S



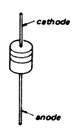
LM8364



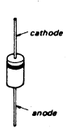
2SA1175-HFE



1SS119

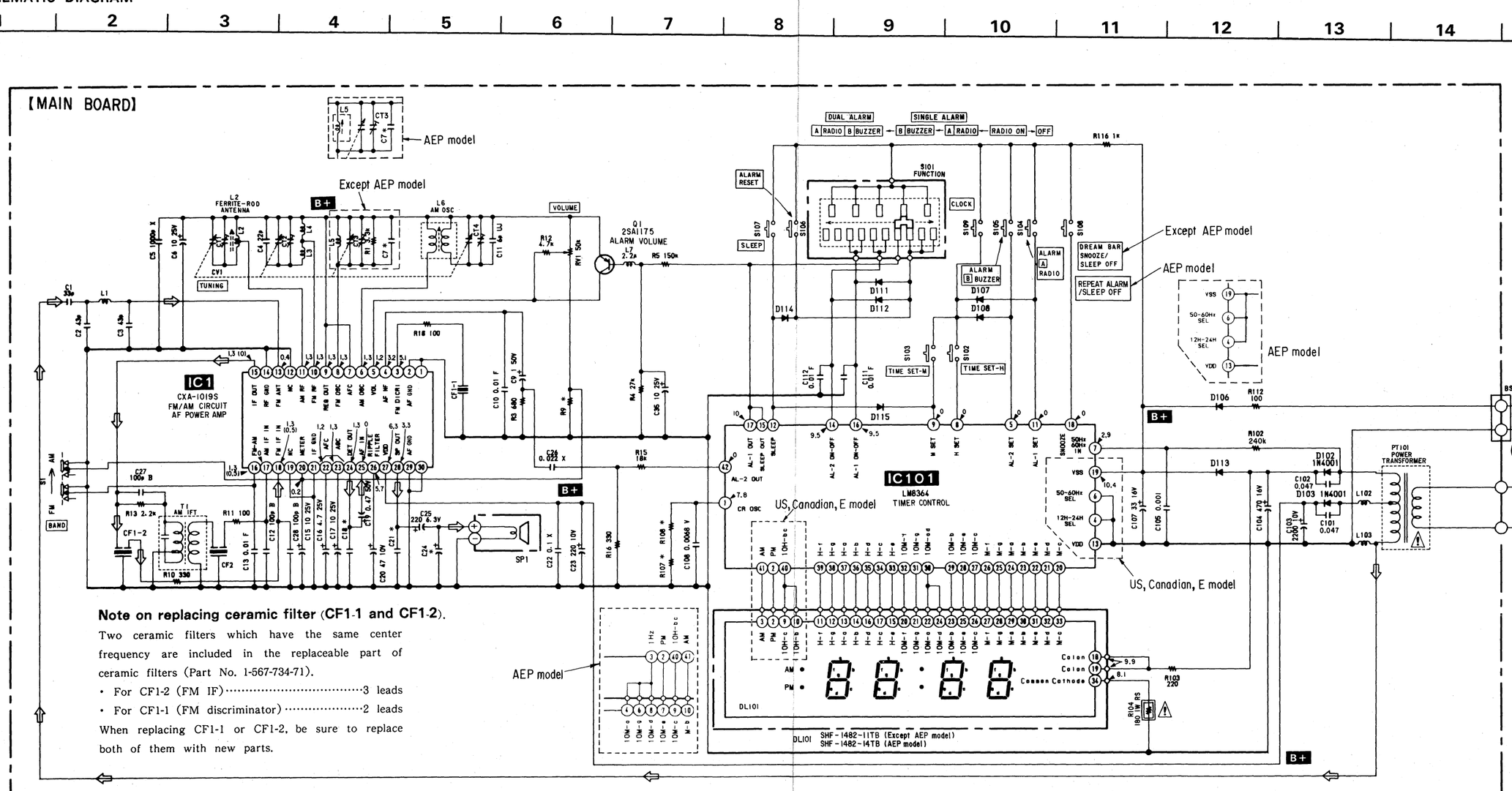


10E-2



● SEMICONDUCTOR LOCATION

Ref. No.	Location	Ref. No.	Location
IC1	C-4	D111	C-11
IC101	B-8	D112	C-11
		D113	E-8
Q1	D-3	D114	C-6
		D115	C-8
D102	D-9		
D103	D-11		
D106	E-7		
D107	C-11		
D108	C-11		



Note on replacing ceramic filter (CF1-1 and CF1-2).

Two ceramic filters which have the same center frequency are included in the replaceable part of ceramic filters (Part No. 1-567-734-71).

- For CF1-2 (FM IF) ·····3 leads
- For CF1-1 (FM discriminator) ·····2 leads

When replacing CF1-1 or CF1-2, be sure to replace both of them with new parts.

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- △ : internal component.
- ⊏W⊐ : nonflammable resistor.

- B+ : B+ Line
- Voltages are taken with a VOM (50kΩ/V). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

＊:

Ref. No.	US, Canadian model	AEP model	E model
C7	27p	30p	30p
C18	0.027	0.022	0.022
C21	0.1	0.22	0.22
C24	0.47/50V	10/25V	10/25V
R9	10k	20k	20k
R107	20k	24k	20k
R108	110k	130k	110k

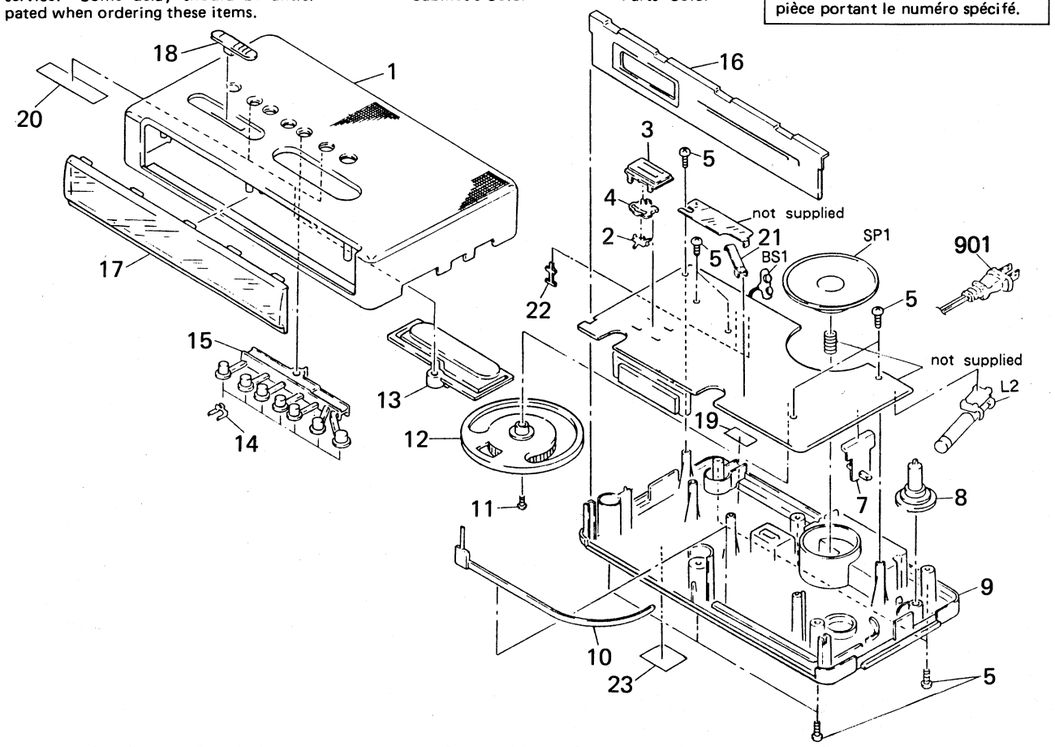
SECTION 5
EXPLODED VIEW

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ ↑
  Cabinet's Color Parts' Color

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.



No.	Part No.	Description	Remarks
1	3-901-721-01	(EXCEPT AEP:BLK).....CABINET (UPPER)	
	3-901-721-11	(EXCEPT AEP:BEIGE)...CABINET (UPPER)	
	3-901-721-21	(EXCEPT AEP:WHT).....CABINET (UPPER)	
	3-901-721-31	(EXCEPT AEP:GRY).....CABINET (UPPER)	
	3-901-721-41	(AEP:WHT).....CABINET (UPPER)	
	3-901-721-51	(AEP:BLK).....CABINET (UPPER)	
2	3-986-304-01	PLATE (FUNCTION), CONTACT (S101)	
3	*3-986-306-01	HOLDER (FUNCTION)	
4	*3-986-305-01	SLIDER (FUNCTION)	
5	7-685-648-79	SCREW +P 3X12 TYPE2 NON-SLIT	
7	3-901-715-01	(BLK).....KNOB (BAND)	
	3-901-715-11	(BEIGE)...KNOB (BAND)	
	3-901-715-21	(WHT).....KNOB (BAND)	
	3-901-715-41	(GRY).....KNOB (BAND)	
8	*3-901-704-01	(BLK).....KNOB (VOL)	
	*3-901-704-11	(BEIGE)...KNOB (VOL)	
	*3-901-704-21	(WHT).....KNOB (VOL)	
	*3-901-704-41	(GRY).....KNOB (VOL)	
9	*3-901-724-01	(BLK).....CABINET (LOWER)	
	*3-901-724-11	(BEIGE)...CABINET (LOWER)	
	*3-901-724-21	(WHT).....CABINET (LOWER)	
	*3-901-724-31	(GRY).....CABINET (LOWER)	
10	*3-901-707-01	POINTER	
11	7-621-770-67	SCREW +P 2.6X6	
12	*3-901-714-01	(BLK).....KNOB (TUNING)	
	*3-901-714-11	(BEIGE)...KNOB (TUNING)	
	*3-901-714-21	(WHT).....KNOB (TUNING)	
	*3-901-714-41	(GRY).....KNOB (TUNING)	
13	3-901-718-01	(BLK).....BUTTON (DREAM BAR)	
	3-901-718-11	(BEIGE)...BUTTON (DREAM BAR)	
	3-901-718-21	(WHT).....BUTTON (DREAM BAR)	
14	3-901-703-01	PLATE, CONTACT (S102-107,S109)	
15	3-901-717-01	(BLK).....BUTTON (MAIN)	
	3-901-717-11	(BEIGE)...BUTTON (MAIN)	
	3-901-717-21	(WHT).....BUTTON (MAIN)	
16	*3-901-706-01	(US,Canadian)...PANEL, BACK	
	*3-901-706-31	(AEP).....PANEL, BACK	
	*3-901-706-61	(E).....PANEL, BACK	
17	3-901-719-01	PLATE, TRANSPARENT	
18	3-901-716-01	(BLK).....KNOB (FUNCTION)	
	3-901-716-11	(BEIGE)...KNOB (FUNCTION)	
	3-901-716-21	(WHT).....KNOB (FUNCTION)	
	3-901-716-41	(GRY).....KNOB (FUNCTION)	
19	3-831-441-XX	CUSHION, STOPPER (t=0.5)	
20	3-831-441-11	CUSHION, SIDE PLATE (t=0.5)	
21	*3-888-208-11	PLATE, CONTACT (S108)	
22	*3-893-625-01	(AEP)...TERMINAL	
23	*3-901-788-01	(C322)...LABEL, MODEL NUMBER	
	*3-902-065-01	(AEP)....LABEL, MODEL NUMBER	
	*3-902-080-01	(E).....LABEL, MODEL NUMBER	
901	⚠1-555-795-00	(AEP).....CORD, POWER	
	⚠1-558-091-11	(US,Canadian,E)...CORD, POWER	
BS1	1-535-253-00	SNAP, BATTERY	
L2	1-402-405-11	(AEP,E).....ANTENNA, FERRITE-ROD	
L2	1-402-413-21	(US,Canadian)...ANTENNA, FERRITE-ROD	
SP1	1-503-940-21	SPEAKER	

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

Ref.No.	Part No.	Description			
901	⚠1-555-795-00	(AEP).....CORD, POWER			
	⚠1-558-091-11	(US,Canadian,E)...CORD, POWER			
BS1	1-535-253-00	SNAP, BATTERY			
C1	1-102-963-00	CERAMIC	33PF	5%	50V
C2	1-102-966-00	CERAMIC	43PF	5%	50V
C3	1-102-966-00	CERAMIC	43PF	5%	50V
C4	1-102-959-00	CERAMIC	22PF	5%	50V
C5	1-161-039-00	CERAMIC	0.001MF	10%	25V
C6	1-123-356-00	ELECT	10MF	20%	25V
C7	1-102-961-00	(US,Canadian) ...CERAMIC	27PF	5%	50V
C7	1-102-962-00	(AEP,E)...CERAMIC	30PF	5%	50V
C9	1-123-380-00	ELECT	1MF	20%	50V
C10	1-101-004-00	CERAMIC	0.01MF		50V
C11	1-101-998-00	CERAMIC	6PF	0.5PF	50V
C12	1-102-106-00	CERAMIC	100PF	10%	50V
C13	1-101-004-00	CERAMIC	0.01MF		50V
C15	1-123-356-00	ELECT	10MF	20%	25V
C16	1-123-369-00	ELECT	4.7MF	20%	25V
C17	1-123-356-00	ELECT	10MF	20%	25V
C18	1-161-055-00	(AEP,E)...CERAMIC	0.022MF	10%	25V
C18	1-161-056-00	(US,Canadian) ...CERAMIC	0.027MF	10%	25V
C19	1-123-379-00	ELECT	0.47MF	20%	50V
C20	1-123-306-00	ELECT	47MF	20%	10V
C21	1-161-772-11	(US,Canadian) ...CERAMIC	0.1MF	10%	25V
C21	1-161-896-11	(AEP,E)...CERAMIC	0.22MF		25V
C22	1-161-772-11	CERAMIC	0.1MF	10%	25V
C23	1-126-335-11	ELECT	220MF	20%	10V
C24	1-123-356-00	(AEP,E)...ELECT	10MF	20%	25V
C24	1-123-379-00	(US,Canadian) ...ELECT	0.47MF	20%	50V
C25	1-126-335-11	ELECT	220MF	20%	6.3V
C26	1-161-055-00	CERAMIC	0.022MF	10%	25V
C27	1-102-106-00	CERAMIC	100PF	10%	50V
C28	1-102-106-00	CERAMIC	100PF	10%	50V
C35	1-123-356-00	ELECT	10MF	20%	25V
C101	1-101-006-00	CERAMIC	0.047MF		50V
C102	1-101-006-00	CERAMIC	0.047MF		50V
C103	1-126-234-11	ELECT	2200MF	20%	10V
C104	1-126-103-11	ELECT	470MF	20%	16V
C105	1-102-074-00	CERAMIC	0.001MF	10%	50V
C107	1-124-963-11	ELECT	33MF	20%	16V
C108	1-161-049-00	CERAMIC	0.0068MF	5%	25V
C111	1-101-004-00	CERAMIC	0.01MF		50V
C112	1-101-004-00	CERAMIC	0.01MF		50V
CF1	1-567-734-71	FILTER, CERAMIC (10.7MHz)			
CF2	1-577-072-11	FILTER, CERAMIC (455KHz)			
CT1-4 CV1	1-151-631-11	(US,Canadian)...CAP, VARIABLE			
CT1-4 CV1	1-151-635-11	(AEP,E)...CAP, VARIABLE			
D102	8-719-200-02	DIODE 10E-2			
D103	8-719-200-02	DIODE 10E-2			
D106	8-719-911-19	DIODE 1SS119			
D107	8-719-911-19	DIODE 1SS119			
D108	8-719-911-19	DIODE 1SS119			
D111	8-719-911-19	DIODE 1SS119			
D112	8-719-911-19	DIODE 1SS119			
D113	8-719-911-19	DIODE 1SS119			
D114	8-719-911-19	DIODE 1SS119			
D115	8-719-911-19	DIODE 1SS119			
DL101	8-719-974-89	(US,Canadian,E)...DIODE SHF-1482-11TB			
DL101	8-719-974-90	(AEP).....DIODE SHF-1482-14TB			
IC1	8-752-035-29	IC CXA1019S			
IC101	1-807-266-11	IC LM8364			
L1	1-401-228-00	ANTENNA COIL			
L2	1-402-405-11	(AEP,E).....ANTENNA, FERRITE-ROD			
L2	1-402-413-21	(US,Canadian)...ANTENNA, FERRITE-ROD			
L3	*1-426-074-00	(US,Canadian)...COIL, FM RF (A)			
L3	1-426-253-11	(AEP,E).....COIL, FM RF (1)			
L4	1-406-042-00	(US,Canadian)...COIL, FM RF			
L4	1-426-254-11	(AEP,E).....COIL, FM RF (2)			
L5	*1-422-230-11	(US,Canadian,E)...COIL, VHF			
L5	1-459-815-11	(AEP).....COIL (WITH CORE)			
L6	1-406-028-00	COIL, OSC (MW)			
L7	1-408-109-00	INDUCTOR 2.2UH			
L102	*1-422-229-11	COIL, AIR-CORE			
L103	*1-422-229-11	COIL, AIR-CORE			
PT101	⚠1-449-268-11	(Canadian)...TRANSFORMER, POWER			
PT101	⚠1-449-269-11	(US,E).....TRANSFORMER, POWER			
PT101	⚠1-449-324-11	(AEP).....TRANSFORMER, POWER			
Q1	8-729-119-76	TRANSISTOR 2SA1175-HFE			

Ref.No.	Part No.	Description				
R1	1-249-423-11	(US,Canadian,E) ...CARBON	3.3K	5%	1/4W	
R3	1-249-415-11	CARBON	680	5%	1/4W	
R4	1-249-434-11	CARBON	27K	5%	1/4W	
R5	1-247-883-00	CARBON	150K	5%	1/4W	
R9	1-247-862-11	(AEP,E)...CARBON	20K	5%	1/4W	
R9	1-249-429-11	(US,Canadian) ...CARBON	10K	5%	1/4W	
R10	1-249-411-11	CARBON	330	5%	1/4W	
R11	1-249-405-11	CARBON	100	5%	1/4W	
R12	1-249-425-11	CARBON	4.7K	5%	1/4W	
R13	1-249-421-11	CARBON	2.2K	5%	1/4W	
R15	1-249-432-11	CARBON	18K	5%	1/4W	
R16	1-249-411-11	CARBON	330	5%	1/4W	
R18	1-249-405-11	CARBON	100	5%	1/4W	
R102	1-247-888-11	CARBON	240K	5%	1/4W	
R103	1-249-409-11	CARBON	220	5%	1/4W	
R104 ⚠	1-216-428-00	METAL OXIDE	180	5%	1W	F
R107	1-247-862-11	(US,Canadian,E) ...CARBON	20K	5%	1/4W	
R107	1-247-864-11	(AEP)...CARBON	24K	5%	1/4W	
R108	1-247-880-11	(US,Canadian,E) ...CARBON	110K	5%	1/4W	
R108	1-247-882-11	(AEP)...CARBON	130K	5%	1/4W	
R112	1-249-405-11	CARBON	100	5%	1/4W	
R116	1-249-417-11	CARBON	1K	5%	1/4W	
RV1	1-228-790-21	RES, VAR, CARBON 50K (VOL)				
S1	1-554-222-00	SWITCH, SLIDE (BAND)				
SP1	1-503-940-21	SPEAKER				
T1	1-404-790-11	TRANSFORMER, IF (AM)				

ACCESSORY & PACKING MATERIAL

3-750-243-11	(AEP,E).....MANUAL, INSTRUCTION (ENGLISH,FRENCH,SPANISH,PORTUGUESE)
3-750-243-21	(US).....MANUAL, INSTRUCTION (ENGLISH,FRENCH)
3-750-243-31	(Canadian)...MANUAL, INSTRUCTION (ENGLISH,FRENCH)
3-750-243-41	(AEP).....MANUAL, INSTRUCTION (GERMAN,DUTCH,SWEDISH)
*3-764-869-11	(AEP)...INSTRUCTION, DBP CAUTION
*3-901-564-01	(C320:US).....INDIVIDUAL CARTON
*3-901-569-01	(C320:Canadian)...INDIVIDUAL CARTON
*3-901-570-01	(C320:AEP,E).....INDIVIDUAL CARTON
*3-901-573-01	(C322).....INDIVIDUAL CARTON
*3-901-565-01	CUSHION (LEFT)
*3-901-566-01	CUSHION (RIGHT)

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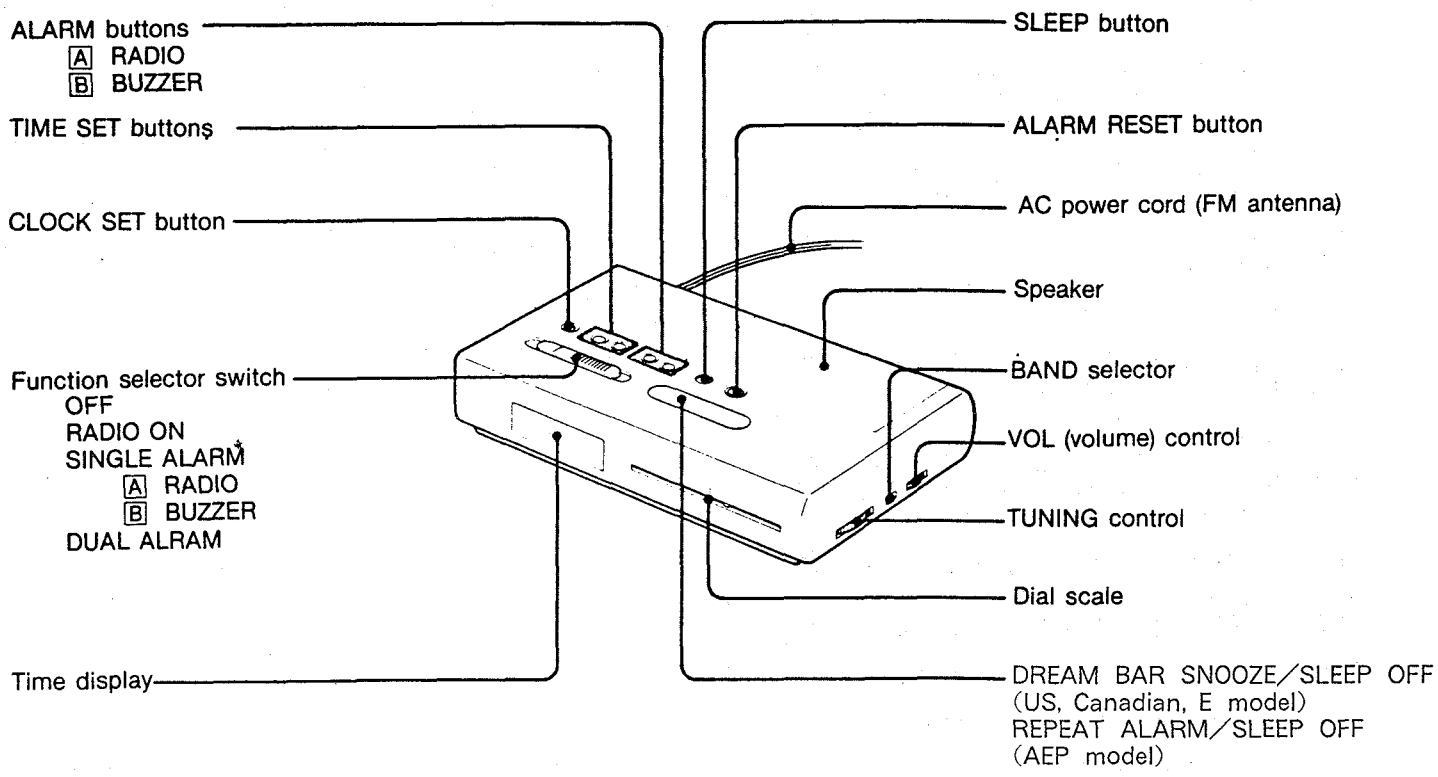
LOCATION AND FUNCTION OF CONTROLS



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